

a fragile component contained in the tank,  
positioned within the footprint of the opening and configured to  
transmit sonic energy; and

93 a barrier that extends above at least the width of  
the fragile component and is positioned so as to protect a  
central region of the length of the fragile component.

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**AMENDED** 13. An apparatus configured to clean a  
semiconductor substrate, comprising:

a tank configured to contain a liquid, the tank having an  
opening configured to allow a substrate to enter the tank from a  
position above the tank;

a fragile component contained in the tank, positioned within  
the footprint of the opening, and configured to transmit sonic  
energy; and

94 a barrier that extends above at least the width the fragile  
component;

wherein:

the fragile component comprises a quartz plate; and

the barrier comprises a substrate support, the  
substrate support comprises an extended roller, and the extended  
roller comprises a hollow extension.

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**AMENDED** 17. An apparatus configured to clean a  
semiconductor substrate, comprising:

95 a tank configured to contain a liquid, the tank having an  
opening configured to allow a substrate to enter the tank from a  
position above the tank;

a fragile component contained in the tank, positioned within  
the footprint of the opening, and configured to transmit sonic  
energy; and

a barrier that extends above at least the width the fragile  
component;

95 wherein the barrier is configured so as to be transparent to the sonic energy transmitted by the fragile component.

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**AMENDED** 20. An apparatus configured to clean a semiconductor substrate, comprising:

a tank configured to contain a liquid, the tank having an opening configured to allow a substrate to enter the tank from a position above the tank;

a fragile component contained in the tank, positioned within the footprint of the opening, and configured to transmit sonic energy; and

96 a barrier extending above at least the width the fragile component;

wherein the barrier has a thickness that is a multiple of one half of the wavelength of the sonic energy transmitted by the fragile component as the sonic energy travels through the barrier material.

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Please add new claims 22-30 as follows:

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NEW 22. The apparatus of claim 9 wherein the barrier comprises at least three substrate support rollers.

97 NEW A 23. The apparatus of claim 22 wherein the barrier is configured so as to be transparent to the sonic energy transmitted by the fragile component.

NEW A 24. The apparatus of claim 22 wherein the barrier has a thickness that is a multiple of one half of the wavelength of the sonic energy transmitted by the fragile component as the sonic energy travels through the barrier material.

**NEW** K 25. The apparatus of claim 11 wherein the extended roller is a bottom roller positioned so as to contact a bottom region of a substrate supported thereby.

**NEW** A 26. The apparatus of claim 25 wherein the barrier is configured so as to be transparent to the sonic energy transmitted by the fragile component.

**NEW** A 27. The apparatus of claim 25 wherein the barrier has a thickness that is a multiple of one half of the wavelength of the sonic energy transmitted by the fragile component as the sonic energy travels through the barrier material.

**NEW** 28. An apparatus configured to clean a semiconductor substrate, comprising:

a tank configured to contain a liquid, the tank having an opening configured to allow a substrate to enter the tank from a position above the tank;

97 a fragile component contained in the tank, positioned within the footprint of the opening, and configured to transmit sonic energy; and

a barrier that extends above at least the width of the fragile component;

wherein:

the barrier comprises a substrate support, the substrate support comprises an extended roller, and the extended roller is a bottom roller positioned so as to contact a bottom region of a substrate supported thereby.

**NEW** 29. The apparatus of claim 28 wherein the barrier is configured so as to be transparent to the sonic energy transmitted by the fragile component.